

CHAPTER VI

DESTRUCTIVE EFFECTS OF TYPHOONS

A. General

Of the 19 typhoons and 2 severe tropical storms of 1960, 12 hit heavily populated areas leaving a trail of death and destruction behind them. Reports from the Philippine Islands, the Trust Territory Islands of the U.S., Hong Kong, Ryukyu Islands, Japan, and the Republic of Korea place the total known fatalities at 926. Thousands more were reported missing or injured, and hundreds of thousands of persons were left homeless.

The five typhoons which caused the greatest destruction were: MARY, which struck Hong Kong; SHIRLEY, which struck Taiwan; OLIVE, KIT and LOLA, which struck the Philippines. Information regarding the damage and loss of life caused by each destructive typhoon is presented in the following paragraphs; however, detailed records of the destructive effects of typhoons are not maintained by JTWC. Most of the data regarding damage was obtained from newspaper articles which appeared in the "PACIFIC STARS AND STRIPES" and the "GUAM DAILY NEWS".

In available data, there were no reports of damage by Tropical Storm NADINE or Typhoons FAYE, NINA and PHYLLIS. These cyclones remained over open water and could have caused damage only to shipping and/or isolated islands.

B. KAREN. Area Affected: Philippine Islands.

As KAREN moved across the Philippines, it left at least 56 persons dead and many others missing. Several fishing boats were reported sunk by the typhoon and it was feared that all the fishermen drowned. In one of the hardest hit regions, the central Philippines, all the crops were destroyed and the people, temporarily, faced starvation. At least 7,000 persons were homeless, and the damage to crops and property was estimated at two million dollars.

C. TROPICAL STORM LUCILLE. Areas Affected: Philippine Islands, Peel Island.

Philippine Islands: LUCILLE caused flash floods that killed nearly 300 Filipinos in the Manila area.

Peel Island: Peel Island experienced winds of 50 kts with gusts to 70 kts as T.S. LUCILLE passed the island. At this time the USS Cayuga County was anchored in the harbor which is open to the SW. The harbor possesses a bottle-necked shape, and winds from the SW quadrant undergo an increase in speed due to the "channeling effect" of the terrain. Thus, the harbor area will experience stronger,

but unrepresentative, winds. The Cayuga County experienced winds of 75 kts which caused the ship to broach.

D. MARY. Areas Affected: Hong Kong, Communist China, Taiwan.

Hong Kong: Typhoon MARY, or "Bloody MARY" as it is sometimes called, was the worst typhoon to hit Hong Kong in 23 years. MARY passed through the colony on 8-9 June, and maximum gusts of 105 kts were reported. During one 24 hour period 14.12 inches of rain fell, and damage to roads, homes, public and private facilities, and communication systems was extensive. Two ocean freighters went aground on the Kai Tak airstrip, and another was driven aground on a reef 160 mi SE of Hong Kong.

The strong winds and heavy rains caused hundreds of refugee shacks to collapse and roads and streets were blocked with fallen trees and debris. Stores and shops were closed, and all public transportation was at a complete standstill. Numerous landslides took the lives of many people. MARY left 18,200 homeless and more than 100 dead, missing, or injured in the refugee crowded colony of Hong Kong. Worst hit were the 300,000 refugees who live in the tin and tarpaper shacks that cling to the rocky hillsides of Hong Kong. Harbor police said that more than 50 fishing vessels capsized and sank in anchorages around Hong Kong at the height of the storm. The only compensation that this typhoon disaster brought to the colony was that MARY's rains brought relief to the local water situation. The reservoirs gained 3 billion gallons of water during the typhoon, which put them at about 2/3 capacity.

Communist China: A dispatch from Communist China stated that the typhoon brought heavy rains and strong winds to the provinces of Fukleien and Kwantung. Dikes and dams were damaged, causing severe flooding, but no figures pertaining to the number of casualties were given. Thousands of people worked night and day reenforcing the dikes against crests of rising waters caused by the typhoon rains. Manpower was also mobilized to gather in the already ripened early rice and other crops.

Taiwan: MARY brought heavy rains to Taiwan, flooding

some of the downtown Taipei areas and damaging some of the rice crops on the S part of the island. The typhoon took the lives of 4 fishermen off the coast of Taiwan, but no fatalities were reported on the island.

E. OLIVE. Areas Affected: Philippine Islands, Hong Kong, Communist China.

Philippine Islands: Passing within 12 miles of Manila, Typhoon OLIVE dumped torrential rains on the city and its suburbs, and partially paralyzed the metropolis of Manila. Many power and telephone lines and advertising signs were blown down in this area, and huge trees were uprooted. However, ample warning gave many residents time to flee to higher ground thus preventing more fatalities. Low-lying areas were flooded by raging rivers and streams that gushed over their banks. During the typhoon virtually all of Manila's roads were impassable and intercoastal shipping was at a standstill. Rainfall at Cubi Point for one 24 hour period during Typhoon OLIVE was 14.96 inches.

OLIVE brought death to 104 persons in the Philippines, and over 500 persons, mostly fishermen, were reported missing. The typhoon left some 60,000 persons homeless in SE Luzon. Reports from the Philippine Government said that over 80 percent of the southern and central Luzon crops, which included coconut trees, rice crops, fishponds, and abaca plantations, were destroyed. Property damage rose to millions of dollars as wide spread destruction of roads, bridges, railroad tracks, and communication lines was reported. The water rose 6 to 8 ft in the low-lying areas of Manila, and a Panamanian freighter and an Italian steamer were reported sunk off the coast of the Bicol Region of southern Luzon.

Hong Kong: No deaths were caused as OLIVE passed S of Hong Kong, but heavy rains flooded the street and did millions of dollars of damage to farmlands.

Communist China: Peiping radio said that Communist Authorities mobilized coastal inhabitants to build dikes and dams against rising waters and to harvest as much rice as possible before the floods and winds destroyed it.

F. POLLY. Areas Affected: Ryukyu Islands, Communist China.

Ryukyu Islands: Okinawa experienced winds of 50 kts and torrential rains as POLLY passed W of the island. The typhoon brought no damage to military installations, and only minor damage was reported to private homes in Okinawan communities. Farmers praised the rain which POLLY brought, because it virtually guaranteed a good rice crop.

Communist China: Peiping radio said that the typhoon brought strong gale to typhoon force winds and torrential rain to parts of the coast. Reports said that a few houses collapsed, a quantity of high stalk crops were flattened, and fruit trees suffered some damage.

G. SHIRLEY. Areas Affected: Ryukyu Islands, Taiwan.

Ryukyu Islands: The typhoon took two lives on the island of Miyako Jima.

Taiwan: Typhoon SHIRLEY passed over Taiwan with maximum sustained winds of 125 kts. It passed almost directly over Taipei, but the mountain ranges which encircle the city shielded it from the full force of the typhoon. Torrential rains sent flood waters raging down Taiwan's rivers, forcing thousands of persons to abandon their homes. People in some communities were isolated by the floods.

The typhoon killed 104 people, destroyed or damaged 9,890 houses and left 50,194 homeless in Taiwan. Rail and highway communications were disrupted and 132 fishing boats were damaged. The islands two main hydro-electric power plants at Sun-Moon Lake were put out of commission by landslides. In the Taichung area, 11.8 inches of rain fell during one 12 hour period. The only bright spot in the situation was the fact that the damage to crops was negligible, because almost all of the year's first crop had been harvested before SHIRLEY struck.

H. TRIX. Areas Affected: Ryukyu Islands, Taiwan, Communist China.

Ryukyu Islands: The crew of the U.S. Coast Guard cutter Ironwood will long remember typhoon TRIX as will the crew of the Army seagoing tug which was sent to the cutter's aid. The abrupt and radical shift in TRIX's course out-

witted the Ironwood as well as the weathermen. The ship had sailed SW from Okinawa in an attempt to escape the typhoon, but the abrupt change in TRIX's track placed the ship in the direct path of the typhoon. The weary 50-man crew of the Ironwood battled the 40 ft seas and 140 kt winds without rest or food for 48 hours. TRIX hit the ship with its strongest winds, and the typhoon's eye passed within a few miles of the Ironwood. A mountainous wave crashed over the vessel, flooded the engine room, and shortcircuited the electrical system. Working in total darkness, the crew was able to restore enough power to enable them to start the engines, bring the rudder under control and radio the Army at Naha, Okinawa for help. An Army tug, which was sent to the cutter's rescue, battled heavy seas for 12 hours before reaching the Ironwood. As the two ships headed back for Naha, the tug's overstrained steering system failed. Hasty repairs were made, and the battered ships crept into port together.

TRIX passed within 120 mi of Okinawa. Kadena AB reported heavy rains and winds of 45 kts, but there was no damage to U.S. military installations on the island, however, four Okinawan fishermen were reported missing.

Taiwan: As it moved across northern Taiwan, typhoon TRIX took the lives of 4 persons and left thousands homeless. The typhoon passed about 30 mi N of Taipei and brought heavy rains to the already flooded island of Taiwan. Reports said that 400 homes were destroyed or damaged by flood waters. One hundred and five small trawlers and 6 larger fishing vessels were sunk, and a 1600-ton steamer ran aground. The mountain ranges again sheltered the heavily populated cities of Taiwan, but winds of 55 kts were recorded. Tidal waves whipped up by TRIX swept over several low-lying villages on Taiwan; however, the villages had been evacuated and no casualties were reported. Many breakwaters were washed out by the waves, and thousands of acres of farmland were flooded.

Communist China: Peiping Radio reported heavy damage in Communist China.

I. VIRGINIA. Area Affected: Japan.

As VIRGINIA moved across the island of Shikoku in S Japan, strong winds and heavy rain affected Nagoya, Kobe, and Osaka. Winds of 80 kts were reported on the island of Shikoku, and 2 persons were killed and 1 was injured.

Nearly 4 inches of rain fell on many parts of S Japan. Reports from the National Police Agency of Japan said that the typhoon caused little property damage although some homes were partially destroyed. Instead, farmers welcomed the heavy rains for their scorched fields. By the time VIRGINIA passed over Honshu, it had weakened considerably thereby causing little damage.

J. WENDY. Area Affected: Japan.

Before it reached Japan, Typhoon WENDY had weakened to tropical storm intensity, and thus caused no significant damage.

K. BESS. Area Affected: Japan.

An abrupt recurvature prevented Typhoon BESS from hitting Tokyo. Veering to the NE just before it got to Tokyo Bay, the typhoon passed to the SE of the city and brought almost continuous rain for 24 hours. During a 21 hour period more than 8.5 inches of rain fell at Choshi, on the southeast coast of Japan, but no serious flooding was reported. Wind damage was negligible.

L. CARMEN. Areas Affected: Ryukyu Islands, Korea.

Ryukyu Islands: CARMEN brought winds of gale strength and heavy rains to Okinawa, disrupting communications between Tokyo and Okinawa. Okinawa was in the eye of CARMEN for over 24 hours, and as the storm moved away, heavy rains and strong winds swept the island. Winds of 50 kts were reported, but wind damage was negligible.

Korea: Along the Korean coast CARMEN, created 50 foot waves which submerged 1,500 houses in Pusan, sank one ship, and caused floods which stranded 2,000 persons. The death toll rose to 24, and the property damage caused by the storm was estimated at more than two million dollars.

M. DELLA. Area Affected: Japan.

The typhoon took the lives of 55 persons, the greatest single disaster taking place at Nishinomiya, where a huge landslide trapped 78 workmen who had been constructing a toll road. Of these, only 40 were rescued.

No damage was reported at U.S. military installations in Japan. Most of the damage done by the typhoon was reported on Honshu and Shikoku Islands, where about 350 houses were damaged or destroyed and another 26,000 flooded.

The evacuation of thousands of persons from coastal areas before the storm hit southern Japan kept casualty figures down. Seventeen inches of rain was reported in one town on Shikoku Island, and damage to fields and crops was heavy. Several fishing boats were sunk or washed away, and several sea walls were breached.

N. ELAINE. Area Affected: Taiwan.

ELAINE left at least 5 dead and 3 missing as it roared past and then across Taiwan. A record of 8 inches of rain was dumped on parts of Taiwan, causing floods which knocked out communications, wrecked or damaged at least 280 homes, and isolated whole villages. At the height of these floods some 11,591 persons were driven from their homes or stranded in them.

O. KIT. Areas Affected: Philippine Islands, Communist China.

Philippine Islands: The 80 kt winds of Typhoon KIT brought death and destruction to the Philippines. The greatest damage occurred S of Manila in the Bicol Province. The heavy rains associated with KIT knocked out railroad lines, roads and bridges, and the storm's winds cut off communications and caused two boats to capsize, taking the lives of all 10 persons on board. At least 8 additional small boats and a 240-ton ship capsized in southern Philippine waters, and two other Philippine ships ran aground.

KIT took a total of 149 lives in the Philippines, and an equal number of persons, mostly fishermen whose boats sank in the turbulent seas, were reported missing. Seventy five thousand families were rendered homeless in the central and southern regions of Luzon. The damage to crops, public works, communications, and public and private property was estimated at three million dollars. Damage to crops was particularly heavy because the typhoon struck at the height of the rice harvesting season.

Communist China: A Communist Chinese news broadcast reported that the typhoon caused widespread loss of rice crops on the Chinese mainland. Radio Peiping also reported that two thirds of the 250,000 acres of rice on Hainan Island and 25,000 acres of rice on Luichow Peninsula were flattened.

P. LOLA. Area Affected: Philippine Islands.

As LOLA approached the Philippines, the associated strong winds and heavy seas caused a fishing vessel to sink, and 19 of its 20-man crew were lost. LOLA was the second typhoon to hit central Luzon in a week. Much of Manila was under 3 ft of water, and rising flood waters threatened to break a dike N of Manila and bring about more destruction. Fifty-eight persons were reported killed during the typhoon, and heavy damage was reported to highways, rail lines, and communications and utilities systems. Because of the breakdowns in the transportation systems, many villages and towns would have faced starvation had they not received food supplies quickly. Fortunately, government and volunteer relief workers rushed food supplies to these stricken communities. The rice crops, already heavily damaged by Typhoon KIT, suffered additional severe losses. Damage to property and crops was estimated at 15 million dollars.

Q. MAMIE. Areas Affected: Iwo Jima, Japan.

Iwo Jima: MAMIE brought wind gusts of 90 kts to the island of Iwo Jima, but the amount of damage, if any, is not known.

Japan: As it passed SE of Tokyo, winds of 70 kts were recorded at the island of Hachijo Jima. Powerful gusts whipped tiles off roofs on the island of Oshima in the mouth of Tokyo Bay, and churned up waves 18 to 20 ft high.

R. OPHELIA. Area Affected: Caroline Islands.

As it passed over Ulithi, Typhoon OPHELIA killed 2 children, injured 4 other persons, and severely damaged all buildings except the concrete U.S. Coast Guard Loran Station and a church. Winds in excess of 125 kts were experienced, and the atoll was covered by two ft of water. The airfield at Falalop was flooded and covered with debris, as was the rest of the island. Two ships were immediately sent to Ulithi with emergency rations and medical supplies for all of the island's inhabitants.

This typhoon is the second named OPHELIA to cause devastation and suffering on Ulithi. Typhoon OPHELIA of 16 January 1958 was even more destructive.

For damage caused by OPHELIA (1960) on Ulithi, see following page.

